REMARKS

Applicants affirm the election of Group I, claims 1-7 and 12-14 for prosecution, without traverse (Restriction Requirement). With respect to the election of species requirement, Applicants affirm the Election of Species a) and d) as set out at page 3 of the Office Action (where the agent is a fluorine-containing polymer and where the cationic polymer is added after polymerization), also without traverse. Claims 12-14 have been amended to depend from claim 1, and non-elected claims 8-11 have been canceled. Applicants reserve the right to file a divisional or continuation application directed to canceled subject matter.

Claim 1 has been amended to incorporate therein the recitation of claim 3, and to further define the repeating unit (II) as being derived from at least one fluorine-containing monomer as described at page 22, line 24-page 23, line 17, and to further define the repeating unit (III) derived from at least one crosslinkable monomer as described at page 24, lines 6-13 of the specification. Moreover, as recited in amended claim 1, the fluorine-containing polymer consists essentially of (I) and one or both of (II and III) where (I) is a repeating unit derived from a monomer having a fluoroalkyl group. Claims 2 and 3 have been canceled. Additionally, claim 1 has been amended to recite that the fluorine-containing low molecular weight compound has a molecular weight of less than 2,000 as described at page 28, lines 6-7 of the specification. Claims 2 and 3 have been canceled.

Review and reconsideration on the merits are requested.

Claims 1-7, 13 and 14 were rejected under 35 U.S.C. § 112, second paragraph.

Particularly, the Examiner considered (i) the term low MW as defined indefinite; (ii) claim 3 to be confusing in that it is not clear how many combinations are being claimed; (iii) that it is unclear how polyethyleneimine, melamine-formaldehyde resin, urea-formaldehyde resin and dicyanamide-formaldehyde resin are cationic as claimed in claim 4; (iv) the meaning of "polyamine modified product" as claimed in claim 4 to be unclear; and (v) the meaning of "polyamide polyamine-epichlorohydrin reaction product" as claimed in claim 4 to be unclear.

The Examiner's comments are addressed in turn, as follows.

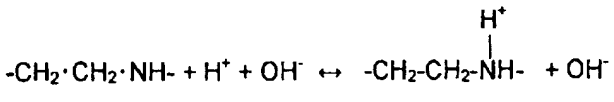
(i) Claim 1 has been amended to recite that the fluorine-containing low molecular weight compound has a molecular weight of less than 2,000.

(ii) Claim 3 has been amended to recite that the fluorine-containing polymer comprises (I) and one or both of (II) and (III). This is described at page 22, lines 6-19 of the specification.

(iii) Dicyanamide-formaldehyde resin has been deleted from claim 4 which describes the water-soluble cationic polymer. Applicants address polyethylene imine, melamine-formaldehyde resin and urea-formaldehyde resin as follows.

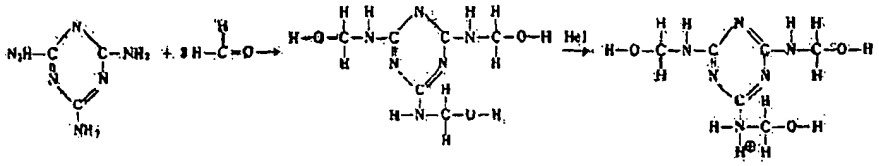
Polyethyleneimine:

Polyethyleneimine $(-CH_2 \cdot CH_2 \cdot NH-)_n$ is dissolved in water, and then polyethyleneimine forms a stable colloid liquid having the following cation.



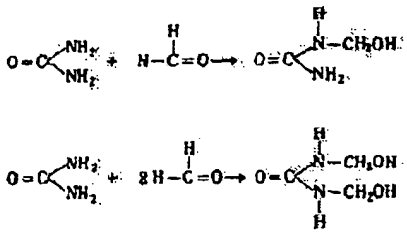
Melamine-formaldehyde resin:

The melamine-formaldehyde resin can have a cationic charge by the addition of acid.

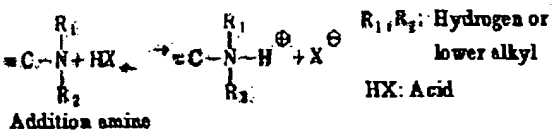


Urea-formaldehyde resin:

The urea-formaldehyde resin is a polymer prepared from methylol urea of the following formula which is a reaction product of urea and formaldehyde.

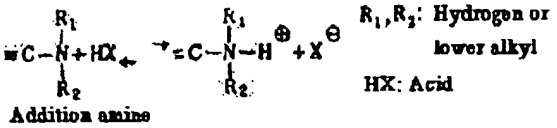


During the condensation step of the urea-formaldehyde resin, an amine (for example, ethylene amines such as tetraethylene pentamine and diethylene triamine, and guanidine hydrochloride and epichlorohydrin tetraethylene pentamine) is introduced and then an acid is added to form a cation as follows:



(iv) Polyamine modified product:

The polyamine modified product means a product which is prepared by cation-modifying an amine group-containing material by the addition of an acid as follows:



(v) Polyamide polyamine-epichlorohydrin reaction product:

The polyamide polyamine-epichlorohydrin reaction product can be prepared by reacting epichlorohydrin with a basic low-molecular weight polyamide (that is, polyamide-polyamine chain) derived from a polyalkylene polyamine (e.g., diethylene triamine) and an aliphatic dicarboxylic acid (e.g., adipic acid).

It is respectfully submitted that the claims as amended full comply with 35 U.S.C. § 112, and withdrawal of the foregoing rejection is respectfully requested.

Claims 1-7, 13 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,346,949 to Fukazawa in light of the admitted state of the prior art or U.S. Patent 6,472,019 to Yamaguchi et al.

The Examiner considered Fukazawa as teaching a method and treatment liquid substantially as claimed, with exception of application using an exhaust process (i.e., adjusting the pH of the treatment liquid to at most 7, applying the treatment liquid to a textile and treating the textile with steam). The Examiner cited page 1 of the present specification as teaching that the "exhaust" method of application is known in the art. Alternatively, the Examiner cited Yamaguchi et al. as teaching a process of applying a fluorinated composition by an exhaust process to impart water and oil repellency.

The reason for rejection was that it would have been obvious to use Yamaguchi et al.'s exhaust process to apply the treatment composition of Fukazawa with a reasonable expectation of success (presumably in providing good water and oil repellency) using a well-known, conventional application method such as an exhaust process.

Applicants traverse, and respectfully request the Examiner to reconsider in with of the amendment to the claims and the Declaration Under 37 C.F.R. § 1.132 of Kouji Kubota submitted herewith.

Claim 1 has been amended to recite that the fluorine-containing polymer consists essentially of (I) and one or both of (I) and (III), to thereby exclude the treatment liquid of Fukazawa which incorporates an α, β- ethylenically unsaturated monomer containing carboxyl group [component (b)] as an essential component. Methacrylic acid is representative. See, for example, column 2, lines 32-34 and claims 1 and 7 of Fukazawa. The language "consists essentially of" excludes those ingredients which "materially affect the basic and novel characteristics of the claimed composition". The Rule 132 Declaration submitted herewith clearly shows that the absence of the carboxyl group-containing ethylenically unsaturated monomer provides excellent properties (Experiment 1) whereas the introduction of carboxyl group (that is, methacrylic acid) into the fluorine-containing polymer constituting the water- and oil-repellant agent (Experiments 2 and 3) deteriorates water repellency and oil repellency. The composition of the fluorine-containing polymer of Preparative Experiments 1 to 3 is given in Table I at the bottom of page 5 of the Declaration. Notably, Compositions 1 to 3 (as used to prepare Experiments 1 to 3, respectively) were substantially the same, except that Composition 1

did not contain methacrylic acid (i.e., did not contain a carboxyl group-containing ethylenically unsaturated monomer), whereas Compositions 2 and 3 contained methacrylic acid in amounts of 10 and 15 mol%, respectively. As shown in Table II at the bottom of page 6 of the Declaration, the treated carpet of Experiment 1 (where the fluorine-containing polymer did not contain a methacrylic acid monomer) provided remarkably enhanced water repellency and oil repellency as compared with the treated carpet of Experiments 2 and 3 corresponding to Fukazawa where the fluorine-containing polymer includes a carboxyl group-containing ethylenically unsaturated monomer as an essential component.

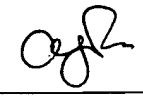
It is respectfully submitted that the amendment to claim 1, excluding the carboxyl group-containing ethylenically unsaturated monomer of Fukazawa from the claimed fluorine-containing polymer, patentably distinguishes the claimed method from that of the cited prior art and withdrawal of the foregoing rejection is respectfully requested.

Withdrawal of all rejections and allowance of claims 1, 4-7 and 12-14 is earnestly solicited.

In the event that the Examiner believes that it may be helpful to advance the prosecution of the present application, the Examiner is invited to contact the undersigned at the local Washington, D.C. telephone number indicated below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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